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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/995,607	11/29/2001	Sadayuki Iwai	216468US2	2319
22850	7590	10/04/2004	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			LEE, SUSAN SHUK YIN	
			ART UNIT	PAPER NUMBER
			2852	

DATE MAILED: 10/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/995,607

Applicant(s)

IWAI, SADAYUKI

Examiner

Susan S. Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on 09 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6, 8, 10, 11, 13-30, 32-60, 63-70 and 72-80 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-6, 8, 10, 11, 13-30, 32-60, 63-70, 72-78 and 80 is/are allowed.
- 6) ☒ Claim(s) 79 is/are rejected.
- 7) ☒ Claim(s) 74 and 78 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

Applicant's arguments, see remarks, filed 7/9/04, with respect to claims 26, 27, 32-34, 38, 41, 45, 47, and 48 have been fully considered and are persuasive. The rejection under 35 USC 103(a) of claims 26, 27, 32-34, 38, 41, 45, 47, and 48 has been withdrawn.

### ***Claim Objections***

Claims 74 and 78 are objected to because of the following informalities:

As to claim 74, lines 12-13, “; and an image tip end of the second surface image” is unclear. Should it be replaced with - - with an image tip end of the second surface image - -? (see claim 39 for similar language).

As to claim 78, line 12, “transfers the image along a belt-like shape” is grammatically incorrect because it is incomplete. It should be a - - belt - - or - - belt-like shape member - -.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 79 is rejected under 35 U.S.C. 103(a) as being unpatentable over Holzhauser (4,593,995) in view of Miyakawa et al. (5,247,334).

Holzhauser discloses a copier with a photoconductor 32 that reads on the instant invention's image supporting member, a first transfer station 42, a second transfer station 44, and a turnover drum 50 that reads on the instant invention's inverting unit. When duplex copy sheets are to be formed, copy sheets CS are fed from the lower supply 43 to a position alongside the photoconductor between developing station 40 and the first image transfer station 42 so a developed image from one side of the document sheet is transferred to one side of the copy sheet. Then the copy sheet is transported with the photoconductor to a turnover drum 50 where the drum picks up the copy sheet and moves it initially in a counterclockwise direction as viewed in Fig. 1 until the trailing edge of the copy sheet is removed from the photoconductor. At the appropriate time in the cycle, the direction of the drum 50 is reversed to return the copy sheet to the photoconductor with the previously applied image then being on the upper side of the sheet (away from the photoconductor). Then the sheet is transported beneath the second transfer station 44 where a second developed image on the photoconductor is applied to the second side of the copy sheet. The copy sheet with the two images thereon then passes through a fusing station 52 which adheres the developed images to the copy sheet. Note column 4, lines 5-32. A document is scanned on a platen 22 with lamps 24. A charging station 36 charges the photoconductor to receive an image of a light pattern of the document page on platen 22. At an exposing station 38, the light pattern selectively discharges the electrostatic

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charge to form a latent image on the photoconductor. The photoconductor then passes through a developing station 40 where toner particles are applied to the latent electrostatic image to develop the image. Note column 3, line 21- column 4, line 4.

When duplex document sheets S are provided in tray 14, it is necessary to copy both sides of the document sheets. The lamp 24 illuminates the document for coping, the document sheet is again fed around turnaround roller 28 and returned to the platen so that the second side of the document is fed through return path 26 back to the top of the stack of sheets. Note column 3, lines 21-50.

Holzhauser differs from the instant invention by not disclosing a liquid developing agent containing toner dispersed in liquid solvent.

Miyakawa et al. discloses it is well known in the art that there are two types of toners, a powder toner for use in a dry-type development and a toner for use in a wet-type development wherein a toner is dispersed in a solvent. The later is referred to as wet-type or liquid toner development. Note column 1, lines 44-51. In high speed and power consumption printing, a toner with a lower melting point is more advantageous. The dry-type toner having a low melting point has a blocking problem, where as the wet-type toner dispersed in solvent does not have such a problem. Therefore, the wet-type toner with a low melting point is more preferred. Note column 1, line 64-column 2, line 3. Miyakawa et al. discloses using this wet-type toner in an image forming system that produces both-sides copying or duplex color copying. Note column 5, lines 12-20, and column 6, lines 37-50.

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify the apparatus of Holzhauser with that of Miyakawa because Miyakawa shows that there are two types of developers, dry and liquid, and shows why one of ordinary skill in the art would have use liquid developer over a dry developer in a duplex copying system. Therefore, one of ordinary skill in the art would have found it obvious to substitute the dry developer of Holzhauser with that of a liquid developer since Miyakawa discloses the advantages of using liquid developer over dry developer such as energy saving in a high speed duplex copying system as disclosed by Miyakawa.

***Allowable Subject Matter***

Claims 1-6, 8, 10, 11, 13-30, 32-60, 63-70, 72-78, and 80 are allowed over the prior art of record.

***Response to Arguments***

Applicant's arguments with respect to claim 79 have been considered but are moot in view of the new ground(s) of rejection.

In view of the amendment filed 7/9/04, the previous objection to the drawings is hereby withdrawn.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan S. Lee whose telephone number is 571-272-2137. The examiner can normally be reached on Mon. - Fri., 10:30-8:00, Second Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Art Grimley can be reached on 571-272-2136 or 571-272-2800 (Ext. 52).

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The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Susan S. Lee  
Primary Examiner  
Art Unit 2852

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